

Steroids

About 83 000 young Canadians between the ages of 11 and 18 are using anabolic steroids to improve their sport performance and/or to change the way they look (99% of the users are men)

Steroids can cause;

- Heart Disease
- Stunted Bone Growth
- Damage to Liver and Kidneys
- Sterility and Impotence
- Hair Loss
- Breast Enlargement
- Severe Acne
- Aggressiveness
- Severe Mood Swings
- Paranoia

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Anabolic Steroids

- most common used drug in sports
- similar to testosterone
- promotes the development of male characteristics and stimulates growth of muscle tissue
- more than 100 types available
- effectiveness - increases muscle strength through increase in lean body mass
 - allows longer and harder training
 - increases competitiveness

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Side Effects

Water Retention - puffiness in the face and neck

Acne- can cause it, make it worse if you get it

Gynecomastia- formation of breasts

Aggression- fight with family and friends, uptight (more intense during workouts)

Hypertension- high blood pressure

Cardiovascular Disease- affect cholesterol levels, builds up over time, clogs arteries

Impotence- occurs when a user goes on and off steroids

Behavioural Changes- mood swings, anxiety, difficulty sleeping

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Beta Blockers

- calm and control heart rate

Side Effects

- depression, decreased libido, lathargic

- banned in specific sports where they would provide an advantage; biathlon, archery, bobsleigh, diving, luge, shooting, ski jumping, free-style jumping

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Blood Doping

- involves transfusion of blood to increase O₂ carrying capacity, increasing O₂ available to the working muscles
- athlete may have blood taken away, train with depleted levels and then have blood replaced
- using their own blood, red blood cells are separated from the plasma, stored and reinfused 1-7 days before a competition

Effectiveness

- can elevate RBC 8-20%
- may contribute to increased cardiac output
- aerobic capacity increases 5-13%
- increased max O₂ consumption

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Side Effects

- develop allergic reactions
- acute kidney damage
- delayed transfusion reaction
- transmission of infections (HIV)
- overload circulation
- metabolic shock
- increase blood viscosity

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Diuretics

- used by athletes to reduce weight quickly in sports where weight categories are important
- used as masking agents to reduce concentration of illegal substances in the body

Side Effects

- faintness
- dizziness
- muscle cramps
- headaches
- nausea
- dehydration

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Hormones

- includes HGH (Human Growth Hormone), EPO (Erythropoietin)
- some of the hormones are already present in your body
- these hormones carry messages to;
 - increase growth
 - influence sexual and general behaviour
 - control pain
- abnormal concentrations are tested for and banned

Side Effects

- muscle wastage
- enlarged internal glands
- unusual growth patterns

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Erythropoietin

- a hormone produced by the kidneys which stimulates the bone marrow to produce red blood cells

Side Effects

- increased blood viscosity
- increased systolic blood pressure
- increased chance of stroke, heart attack and pulmonary embolism

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Creatine

- one of the most controversial supplements that help with training
- not banned referred to as "legal steroid"
- \$100 million in sales in 1998
- manufactured by your body
- natural protein-like substance (nutritional supplement) that gives a dose of amino acids similar to those found in meat
- gives athlete ability to train harder to build muscle
- taken as a training aid in addition to extreme levels of training (this training forces the body to produce protein for thicker muscle)
- increasing creatine content of muscle increases muscle Phosphocreatine levels which enhances the ATP-PC energy system by better maintenance of PC stores
- can delay the onset of fatigue
- increases the size of muscle
- doesn't work well for runners, helps for high-intensity exercise lasting less than a minute (weight-lifting, jumping, sprinting)

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Side Effects

- diarrhea
- nausea
- involuntary clenched teeth
- sound of rushing in the ears
- muscle cramps in legs

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